Remarks

Claims 6 through 8 and 12 through 30 remain pending in the application. Applicants have amended claims 6, 12, 15, 18, 21, 23 through 25 and 28 to correct typographical errors.

The Office Action rejected claims 6, 12, 21 through 24, 27 and 30 as obvious over Newman et al., Automated Ventilation, CPR, and Circulatory Assistance Apparatus, U.S. Patent 4,424,806 (Jan. 10, 1984) in view of Warwick et al., Chest Compression Apparatus, U.S. Patent 4,838,263 (Jun. 13, 1989) under the assertion that Newman teaches a belt sized to circumferentially fit around the chest to cover substantially the entire width and superior-inferior length of the sternum; that Newman also teaches a bladder as two sheets of non-extensible material; that while the Newman bladder might not include a top panel and a bottom panel it would have been "within the realm of the artisan of ordinary skill to have a separate bladder from the external sheet;" that Warwick teaches a vest having a shell with a bladder between the shell and the chest; that Warwick teaches the vest be made of non-stretch cloth; and that it would have been obvious to modify Newman to use separate top and bottom panels for the bladder as taught by Warwick to provide a more durable vest.

Applicants point out that the Office Action misapprehends both the references and the claims. Newman does not show a belt sized to cover substantially the entire width of the chest and the length of the sternum. Instead, Newman uses four narrow straps to restrain the chest and abdominal bladders (item numbers 34, 36, 54 and 56). In addition, neither Newman nor Warwick teaches separate top and bottom panels for the bladder, and the Office Action statement to the contrary makes no sense. If the panels were separate, then no airtight bladder could be formed. (A bladder, by definition, must be airtight.) Thus, the Office Action statement regarding the use of separate top and bottom panels for

the bladder underscores the Office Action's misunderstanding of the references.

The Office Action also misapprehends the claims. The bladder is formed from a top-belt panel (in other words, a panel of material located nearer to the belt) and a bottom-chest panel (in other words, a panel of material located nearer to the chest). The two panels are sealed together to form a bladder and a radially extensible bellows. The Office Action statements regarding using separate panels underscores that the Office Action's misunderstanding of the claims. Since the Office Action has misunderstood both the references and the claims, the Office Action has not stated a prima facie case of obviousness.

In addition, the proposed combination does not meet all of the limitations of the claims. Newman only shows the use of narrow straps to hold the bladder. Warwick shows the use of a shell that completely encloses the bladder. The combination of Newman and Warwick would create a device equivalent Warwick alone; in other words, a shell encompassing a bladder. Nothing in Newman or Warwick shows or suggests using a wide *belt*. Claims 6, 12, 21 through 24, 27 and 30 all require a belt sized to cover substantially the entire width of the chest and the length of the sternum. This limitation is neither shown nor suggested by either Newman or Warwick, so it is not possible to combine the references to meet the limitations of the claims. In addition, the choice of belt width is non-obvious because belt width affects how the bladder expands and hence how the chest compresses. Because the proposed combination cannot meet all of the limitations of the claims, the claims are non-obvious.

In addition, the Office Action has provided no motivation to combine the references. The Office Action stated that it is "within the realm of the artisan of ordinary skill to have a separate bladder from the external sheet." However, this is a conclusory and unsupported statement that does not suggest why one

would be motivated to modify Newman. The Office Action also stated that "it would have been obvious to modify Newman to use separate top and bottom panels as taught by Warwick to provide a more durable vest." As described above, this statement makes no sense and thus cannot serve as a motivation to combine the references. In addition, even if creating a more durable vest were an advantage, the statement does not suggest how making a more durable vest would motivate one to modify Newman. The claims have nothing to do with creating a more durable vest; instead, they are directed towards creating a more effective chest compression device. Statements regarding the durability of the device are irrelevant and thus cannot serve as a motivation to combine the references. Since no motivation has been proposed to combine the references, the Office Action has not stated a prima facie case for the obviousness of the claims. Furthermore, since both the proposed combination and the rejections makes no sense there can be no motivation to modify Newman. Accordingly, the claims are non-obvious.

The Office Action rejected claims 7, 13, 25 and 28 as obvious over Newman and Warwick in view of Sandman, Anti-Shock Pressure Garment, U.S. Patent 4,355,632 (Oct. 26, 1982) under the assertion that Sandman teaches using nylon coated with polyurethane and that it would have been obvious to modify Newman and Warwick to use polyurethane coated nylon as "an obvious air impervious material to complete the Newman device."

Claims 7, 13, 25 and 28 ultimately depend from claims 6, 12 and 21, respectively, all of which are non-obvious for the reasons described above. Thus, claims 7, 13, 25 and 28 are non-obvious. In addition, the Office Action has not sated a motivation to combine the references. The Office Action statement is merely an assessment of one aspect of using polyurethane coated nylon for the bladder material, and the characterization of obviousness is conclusory. The statement does not provide any motivation for why

one would modify Newman and Warwick. Thus, the Office Action has not stated a prima facie case of obviousness with respect to claims 7, 13, 25 and 28.

In addition, Sandman is non-analogous art with respect to the claims. Sandman shows a pressure suit designed for use in treating patients experiencing shock. The pressure suit does not perform chest compressions related to CPR. Thus, Sandman is not reasonably related to the subject matter of the claims and cannot be used as a reference to support an obviousness rejection. Accordingly, claims 7, 13, 25 and 28 are non-obvious.

The Office Action rejected claims 8, 14 through 17, 26 and 29 as obvious over Newman and Warwick in view of Curlee, Compound Force Therapeutic Corset, U.S. Patent 4,682,588 (Jul. 28, 1987) under the assertion that it would have been obvious to have the inflatable portion larger than the belt portion so as to reduce the amount of material used for the belt as taught by Curlee.

Claims 8, 14 through 17, 26 and 29 ultimately depend from claims 6, 12 and 21, respectively, all of which are non-obvious for the reasons described above. Thus, claims 8, 14 through 17, 26 and 29 are non-obvious.

In addition, the Office Action misapprehends Curlee. Curlee shows a back brace formed from hand-pumped bladders. Contrary to the assertion of the Office Action, the bladders do not extend past the belts. Since the Office Action misapprehends Curlee, the Office Action has failed to make a prima facie case of obviousness.

The Office Action also fails to state a motivation to combine the references. The Office Action states that "it would have been obvious to have the inflatable portion larger than the belt portion so as to reduce the amount of material used." The Office Action has, again, stated a purported advantage without any

suggestion as to why that advantage would motivate one to combine the references. With respect to the claims, reducing the amount of belt material is wholly irrelevant. If reducing the amount of belt material were important then the belt would not cover a substantial portion of the chest as claimed. Thus, the Office Action statement cannot serve as a motivation to combine the references. Hence, the Office Action has failed to state a prima facie case of obviousness.

In addition, Curlee is non-analogous art with respect to the claims. Curlee shows a back brace that is wholly incapable of performing chest compressions. The Curlee device is not reasonably related to the claims and thus is non-analogous art with respect to the claims. Accordingly, claims 8, 14 through 17, 26 and 29 are non-obvious.

The Office Action rejected claim 18 as obvious over Newman and Warwick in view of Huxley III, et al., Respirator Belt, U.S. Patent 2,899,955 (Aug. 18, 1959) under the assertion that Huxley teaches using a removable bladder and that it would have been obvious to further modify Newman and Warwick to removably attach the bladder so that the bladder can be replaced.

As described above, the combination of Warwick and Newman does not show a belt sized to cover the entire chest as claimed. Huxley adds nothing with regard to using a wide belt to hold a bladder and thus adds nothing to the base rejection. Accordingly, claim 18 is non-obvious.

In addition, the Office Action also fails to state a motivation to combine the references. The Office Action states that "it would have been obvious to...further modify Newman to removably attach the bladder...so that the bladder can be replaced." The Office Action has, again, stated a purported advantage without any suggestion as to why that advantage would motivate one to combine the references. Thus, the Office Action statement cannot

serve as a motivation to combine the references. Accordingly, the Office Action has failed to make a prima facie obviousness rejection of claim 18.

The Office Action rejected claim 19 as obvious over Newman, Warwick and Huxley in view of Sandman under the assertion that Sandman teaches using nylon material coated with polyurethane and that it would have been obvious to further modify the references to use polyurethane coated nylon "as an obvious air impervious material to complete the Newman device."

Claim 19 is non-obvious since it depends from claim 18, which is non-obvious. In addition, as described above, the Office Action has failed to state a motivation to combine the references. Sandman is also non-analogous art with respect to claim 19 since Sandman is a pressure suit and claim 19 is directed to an unrelated chest compression vest. Accordingly, claim 19 is non-obvious.

The Office Action rejected claim 20 as obvious over Newman, Warwick and Huxley in view of Curlee under the assertion that it would have been obvious to modify the references to have the inflatable portion of the belt larger than the belt portion to reduce the amount of material used.

Claim 20 is non-obvious since it depends from claim 18, which is non-obvious. In addition, as described above, the Office Action has failed to state a motivation to combine the references. Curlee is also non-analogous art with respect to claim 20 since Curlee is a back brace and claim 20 is directed to an unrelated chest compression vest. Accordingly, claim 20 is non-obvious.

The Office Action rejected claims 6 through 8 and 12 through 30 under obviousness-type double patenting over Gelfand et al., Vest Design for a Cardiopulmonary Resuscitation System, U.S. Patent 5,769,800 (Jun. 23, 1998) and over Gelfand in view of

Sandman, Curlee or Huxley. Applicants have included a terminal disclaimer with this response, thereby overcoming the rejections.

Conclusion

This response has addressed all of the Examiner's grounds for rejection. The rejections based on prior art have been traversed. Reconsideration of the rejections and allowance of the claims is requested.

Date: April 9, 2003

By: Theodore D. Fay III

Theodore D. Fay III, Esq.
Reg. No. 48,504

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re Application of:	
Rothman, et al.	Art Unit: 3764
Serial No.: 09/062,714	
Filed: April 20, 1998	
For: Belt with Detachable Bladder for Cardiopulmonary Resuscitation and Circulatory Support	Examiner: DeMille, D.

ATTACHMENT OF CLAIMS AND AMENDED SPECIFICATION PARAGRAPHS

The claims, including those amended by the Response submitted herewith on April 9, 2003, are as follows:

6. (twice amended) An inflatable vest for administering CPR to a patient, the patient having a chest, armpits, and a sternum, said sternum having a superior-inferior length and said chest having an anterior surface, the inflatable vest comprising:

a belt sized to circumferentially fit around the patient and to cover substantially the entire width of the chest between the armpits and to cover substantially the entire superior-inferior length of the sternum, said belt being substantially circumferentially inextensible when fitted around the patient; and

a bladder attached to the belt, said bladder having a width and said bladder comprising:

a bottom-chest panel composed of an inextensible material that is adapted to cover at least substantially the entire portion of the anterior surface of the chest of the patient;

a top-belt panel composed of an inextensible material and sealed to the bottom-chest panel to form a gas tight bladder chamber having an opening to receive compressed gas;

wherein the bottom-chest panel and the top-belt panel form a radially extensible bellows.

7. (unchanged) The vest of claim 6, wherein the bottom-chest panel and the top-belt panel are made of nylon fabric double coated with polyurethane.

8. (unchanged) The vest of claim 6, wherein the width of said bladder is at least two inches greater than the width of the belt.

12. (twice amended) An inflatable vest for administering CPR to a patient, the patient having a chest, armpits, and a sternum, said sternum having a superior-inferior length, the vest comprising:

a belt sized to circumferentially fit around the patient and to cover substantially the entire width of the chest between the armpits and to cover substantially the entire superior-inferior length of the sternum, said belt being substantially circumferentially inelastic when fitted around the patient; and

a bladder, attached to the belt, said bladder having a width, said bladder comprising:

a bottom-chest panel composed of an inelastic material that is adapted to cover at least substantially the

entire portion of the top of the chest of the patient; and

a top-belt panel composed of an inelastic material and sealed to said bottom-chest panel to form a gas tight bladder chamber having [a] an opening to receive compressed gas;

wherein the bottom-chest panel and the [top-chest] top-belt panel form a radially inelastically extensible bellows.

13. (unchanged) The vest of claim 12, wherein the bottom-chest panel and the top-belt panel are made of nylon fabric double coated with polyurethane.

14. (unchanged) The vest of claim 12, wherein the width of said bladder is at least two inches greater than the width of the belt.

15. (twice amended) An inflatable vest for administering CPR to a patient, the patient having a thorax, the vest comprising:

a belt sized to circumferentially fit around the patient, said belt having a width to cover substantially the entire thorax of the patient, said belt being substantially circumferentially inextensible when fitted around the patient; and

a bladder, attached to the belt, said bladder having a width greater than the width of the belt, said bladder comprising:

a bottom-chest panel composed of an inextensible material that is adapted to cover substantially the entire thorax of the patient;

a top-belt panel composed of an inextensible material and sealed to said bottom-chest panel to form a gas

tight bladder chamber having [a] an opening to receive compressed gas;

wherein the bottom-chest panel and the [top-chest] top-belt panel form a radially extensible bellows.

16. (unchanged) The vest of claim 15, wherein the width of said belt is about ten inches.

17. (unchanged) The vest of claim 15, wherein the width of said bladder is at least two inches greater than the width of the belt.

18. (twice amended) An inflatable vest for administering CPR to a patient, the patient having a chest, armpits, and a sternum, said sternum having a superior-inferior length, said vest comprising:

a belt sized to circumferentially fit around the patient and to cover substantially the entire width of the chest between the armpits and to cover substantially the entire superior-inferior length of the sternum, said belt being substantially circumferentially inextensible when fitted around the patient;

a detachable bladder, detachably attached to the belt, said bladder having a width, said bladder comprising:

a bottom-chest panel composed of an inextensible material that is adapted to cover at least substantially the entire portion of the top of the chest of the patient;

a top-belt panel composed of an inextensible material and sealed to said bottom-chest panel to form a gas tight bladder chamber having [a] an opening to receive compressed gas;

wherein the bottom-chest panel and the [top-chest] top-belt panel form a radially extensible bellows.

19. (unchanged) The vest of claim 18, wherein the bottom-chest panel and the top-belt panel are made of nylon fabric double coated with polyurethane.

20. (unchanged) The vest of claim 18, wherein the width of said bladder is at least two inches greater than the width of the belt.

21. (amended) An inflatable vest for administering CPR to a patient, the patient having a chest, said chest having an anterior surface extending laterally between the patient's armpits and superiorly along the superior-inferior length of the patient's sternum, said inflatable vest comprising:

a belt sized to circumferentially fit around the patient's chest and to cover substantially the entire anterior surface of the chest, said belt being substantially circumferentially inextensible when fitted around the patient; and

a bladder attached to the belt so that, when the belt is fitted around the patient's chest, the bladder is disposed between the belt and the patient's chest, said bladder having a width and said bladder comprising:

a bottom panel composed of an inextensible material that is adapted to cover substantially the entire anterior surface of the chest of the patient;

a top panel composed of an inextensible material and sealed to the bottom[-chest] panel to form the bladder.

22. (unchanged) The vest of claim 21 wherein the bladder further comprises an opening to receive compressed gas.

23. (amended) The vest of claim 21 wherein the bottom[-chest] panel and the top[-belt] <u>panel</u> form a radially extensible bellows.

24. (amended) The vest of claim 22 wherein the bottom[-chest] panel and the top[-belt] panel form a radially extensible bellows.

25. (amended) The vest of claim 21, wherein the bottom[-chest] panel and the top[-belt] panel are made of nylon fabric double coated with polyurethane.

26. (unchanged) The vest of claim 21, wherein the width of said bladder is at least two inches greater than the width of the belt.

27. (unchanged) The vest of claim 21, wherein the width of said belt is about ten inches.

28. (amended) The vest of claim 24, wherein the bottom[-chest] panel and the top[-belt] panel are made of nylon fabric double coated with polyurethane.

29. (unchanged) The vest of claim 24, wherein the width of said bladder is at least two inches greater than the width of the belt.

30. (unchanged) The vest of claim 24, wherein the width of said belt is about ten inches.

End